

January 8, 1951.

Dr. S. A. Koser,
Department of Bacteriology,
University of Chicago,
Chicago 37, Illinois.

Dear Dr. Koser:

For some time now, I have been looking for a cellobiose-fermenting "E. coli" for some biochemical genetic work on the mechanism of cellobiose fermentation, along the lines of the study by Doudoroff, myself, et. al., on direct maltose fermentation. So far, the only cellobiose-fermenters which I have noted have been Aerogenes types, which are much too gummy for my purposes. The cultural type which we require is one which may be expected to have the appearance on cellobiose-FMB agar which is typical of E. coli on EMB-lactose. Can you help us out in this respect? The most useful sort of culture would be one which promptly ferments sucrose and lactose as well as cellobiose, and which is not gummy on sugar-containing medium.

Lately I have been looking into the question of how widely distributed are strains of E. coli which can be crossed with the original crossable strain, K-12. With the help of a new method, a large number of isolated, mostly from urine cultures, have been tested: about 10% are inter-crossable. If you have retained any cultures of the colon-paracolon-intermediate group which have features of special interest (or not, for that matter!), I should be pleased to test them to see whether they can be exploited for genetic recombination analysis.

With my thanks, in anticipation,

Sincerely,

Joshua Lederberg,
Associate Professor of Genetics